

**LBLN/PUB-3105, Rev. 5**



# **Division ES&H Self-Assessment Manual**

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**Office of Contract Assurance**

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**Record of Revisions**

<b>Rev. No.</b>	<b>Date</b>	<b>Description</b>
3	2/28/02	<p>Changes to:</p> <ul style="list-style-type: none"><li>- Addressing the ES&amp;H Performance Criteria</li><li>- LCATS Inspection Checklist</li><li>- Conducting Formal Inspections</li><li>- Assigning Hazard Levels</li><li>- How LCATS works</li><li>- What Information Goes Into LCATS?</li></ul> <p>Updated Appendices A, B, C.</p>
4	6/29/07	<p>Changed document title and revised format.</p> <p>Substantive changes based on recommendations from peer reviews.</p> <p>Updated referenced to LCATS (now CATS) and OCA (now OCA)</p>
5	4/7/08	<p>Description of division ES&amp;H self-assessment performance criteria updated to explicitly include the division ISM plan and prior year's self-assessment results (Section 3.0).</p> <p>Annual division ES&amp;H self-assessment report includes analysis of performance and establishment of ES&amp;H goals (Section 4.3.2).</p>

## 1.0 Introduction

This Division Environment, Safety and Health (ES&H) Self-Assessment Manual describes how the Laboratory administers a division self-assessment program that conforms to the institutional requirements promulgated in the [LBNL ES&H Self-Assessment Program](#) (LBNL/PUB-5344, latest revision). The institutional program comprises all appraisal and reporting activities that identify environmental, safety, and health deficiencies and associated corrective actions. It is designed to meet U.S. Department of Energy (DOE) requirements for self-assessment. Self-assessment is a continuous process of information gathering and evaluation. A division self-assessment program should describe methods for gathering and documenting information, and methods to analyze these performance data to identify trends and root causes and their corrections.

**The term self-assessment is used to describe the program. The term self-appraisal is used to describe inspection and evaluation activities.**

This manual describes division self-assessment, one of the four types of assessments required as part of the LBNL ES&H Self-Assessment Program. The other types of assessments - Environment, Health and Safety (EH&S) Division technical assurance assessments, Safety Review Committee (SRC) Management of Environment, Safety, and Health (MESH) reviews, and Office of Contract Assurance (OCA) Appendix B assessments - are described in the [LBNL ES&H Self-Assessment Program](#) documents (LBNL/PUB-5344, latest revision). This manual supports that program document and is intended to describe the following:

- Roles and responsibilities for the annual division ES&H self-assessment process.
- Division ES&H self-assessment performance criteria development and framework.
- Division ES&H self-assessment program elements:
  - Planning self-assessment activities.
  - Conducting effective self-appraisals.
  - Tracking and reporting self-assessment results.

## 2.0 Roles and Responsibilities for Self-Assessment

### 2.1 Division Personnel

Consistent with the principles of Integrated Safety Management (ISM), line management is responsible and accountable for ES&H compliance. This is the same management chain that is responsible for carrying out the division's mission. The division therefore must ensure that their line management, along with other division staff, actively participates in the division self-appraisals. Responsibilities for division personnel are as follows:

The division director:

- Ensures that the division's self-assessment program conforms to overall LBNL requirements.
- Allocates staff and budget to implement self-assessment program activities.
- Designates a person to be the lead (termed the self-assessment lead) in coordinating division self-assessment program activities. The lead is usually the division safety coordinator.
- Participates in self-appraisal activities.

Division management:

- Supports and participates in division self-appraisal activities.
- Ensures that corrective actions are effectively implemented.

The self-assessment lead:

- Organizes self-appraisal teams, including team leaders.
- Coordinates preparation of the annual division ES&H self-assessment report.
- Coordinates with other types of self-assessments, including ES&H technical assurance assessments, SRC MESH reviews, and Contract 31 Performance Evaluation and Measurement Plan assessments.

Each self-appraisal team leader:

- Organizes and coordinates formal inspections.
- Coordinates with the managers/supervisors/work leads whose operations are being inspected.
- Ensures that corrective actions are tracked properly.

All employees are responsible for knowing the applicable ES&H requirements, for being aware of unsafe or unhealthy workplace conditions, for recognizing practices that have potential environmental impacts, and for initiating appropriate corrective actions (including notification of a supervisor).

The EH&S Division provides assistance through the EH&S division liaison program. Liaisons provide consultation or training on requirements and inspections. If requested, the division liaison can also participate in the division self-appraisals.

Divisions may also retain non-EH&S Division employees from other divisions to assist in self-appraisals.

## 2.2 EH&S Division

- Division provides assistance through the EH&S division liaison program.
- Liaisons support and participate in division self-appraisal activities as requested by divisions.
- Liaisons provide consultation or training on requirements and inspections.

- Assist in the development of new or modified performance measures.
- Train and support divisions in performing safety walkarounds.

### 2.3 Office of Contract Assurance

- Meet with division representatives and EH&S program leads to develop new or modified performance measures.
- Publish the annual division self-assessment performance measures and maintain on the OCA website.
- Publish guidance for performing annual division self-assessments.
- Assist with division self-assessment planning efforts if requested.
- Validate division self-assessments.
- Prepare annual Labwide ES&H self-assessment report.

## 3.0 Division ES&H Self-Assessment Performance Criteria

A key objective of the division ES&H self-assessment is to evaluate how well the division is doing in maintaining an Integrated Safety Management System (ISMS) in their operations and work activities. The self-assessment performance criteria are the primary indicators for ISMS performance. The performance criteria are comprised of the following three elements:

- Division's ISMS implementation plan, or ISM plan.
- Goals and opportunities for ES&H improvement identified in the prior year's division self-assessment and OCA validation reports.
- Annual institutional division ES&H self-assessment performance measures.

### 3.1 Division Integrated Safety Management System Implementation Plan

To establish the flow-down of ISMS requirements from institutional requirements to the working level, each division develops an ISMS implementation plan, or ISM plan. These plans tailor implementation of institutional requirements in PUB-3000 and the institutional ISM plan. The division ISM plan is the guiding document developed to implement an integrated safety program for each division. Each Division Director is responsible for approving the division's ISM plan.

The annual division ES&H self-assessment provides an opportunity for divisions to assess how effectively they are addressing requirements of their respective division ISM plans.

### 3.2 Prior Year's Division ES&H Self-Assessment

Division's annual ES&H self-assessment reports should identify future safety program improvements and goals resulting from the self-assessment process. OCA self-assessment validation reports also include opportunities for self-assessment process improvements.

Information from both these sources should be considered by divisions when assessing their current year ES&H performance.

### 3.3 Annual Institutional Division ES&H Performance Measures

At the beginning of each performance period, OCA meets with division representatives (typically division safety coordinators) and EH&S program leads to develop new or modified performance measures. Self-assessment performance measures are developed in alignment with institutional ES&H priorities, based on the following input:

- Significant PUB-3000 and institutional ISMS implementation plan objectives: EH&S Division management, in consultation with OCA, identifies priorities and areas of concern that merit assessment through division self-assessment.
- Effectiveness review of the previous year's ES&H self-assessment process: OCA reviews the results of the prior year's division self-assessment process to determine if the assessments: 1) followed the proper protocol, 2) addressed institutional needs, and 3) identified the primary priorities and areas of concern. Lessons learned from this review are used to modify existing performance measures and develop new measures.
- An institutional risk-based gap analysis of assurance systems: OCA performs an annual risk-based assurance gap analysis to assess and rank significant ES&H risks. The risks are compared to existing assurance mechanisms to determine an appropriate assurance methodology. Division ES&H Self-Assessment, MESH reviews, ES&H technical assurance assessments, and other internal and external reviews are considered in determining appropriate assurance methods. When applicable, performance criteria are modified and/or newly developed to address these risks.

Although the performance measures may change from year to year, they are always based on the five core functions and seven guiding principles of ISM. Division ES&H performance is therefore based on the division's ability to fulfill the five core ISMS functions:

- Define the scope of work.
- Analyze the hazards/environmental aspects.
- Develop and implement hazard/environmental aspect controls.
- Perform work within controls.
- Sustain continuous improvement from regular feedback.

In carrying out these functions, divisions are guided by the seven ISM principles:

- Line management responsibility for ES&H
- Clear ES&H roles and responsibilities for managers and staff
- Competency commensurate with responsibilities
- Balanced priorities between research or operations and environment, safety, and health

- Identification of safety standards and requirements
- Hazard/environmental aspect controls tailored to work being performed
- Authorization basis established for the work

The current [Division ES&H Self-Assessment Performance Measures](#) are provided as Appendix A. The measures are grouped by the five ISMS core functions. Within each core function are the specific expectations that the division must address in its self-assessment program. The performance expectations are concise descriptions of the activities and/or desired results indicative of implementation of each of the five core functions. Divisions may also use Guidance for Performing Division ES&H Self-Assessment (Appendix B). OCA validates division self-assessments to ensure consistency and quality of the data.

## 4.0 Division Self-Assessment Program

Divisions develop a program to perform self-appraisals and to report on the status of environment, safety, and health within the division operations. Division self-assessment programs consist of:

- (1) Division planning – understanding the requirements, and focusing evaluations of division performance against requirements of the division ISM plan, division goals and opportunities for improvement identified in the prior year's self-assessment and OCA validation reports, and the annual Division ES&H Self-Assessment Performance Measures. Planning activities may also include selecting self-assessment team members and preparing checklists.
- (2) ES&H self-appraisal activities – ongoing informal inspections (safety walkarounds) and formal inspections of division operations.
- (3) Tracking and reporting results – issues management (identification and tracking ES&H deficiencies through resolution, data monitoring and analysis, and lessons learned) and the annual division ES&H self-assessment report.

### 4.1 Planning Division Self-Assessment Activities

#### 4.1.1 Know the ES&H Requirements

Division management, as well as self-appraisal team members, should be familiar with and understand DOE, federal, state, and Laboratory ES&H requirements that apply to division operations. These individuals may learn the requirements by any of the following methods:

- Referring to LBNL documents: the [LBNL Health and Safety Manual \(LBNL/PUB-3000\)](#), the LBNL [Worker Safety and Health Program \(LBNL/PUB-3851\)](#), and the LBNL [Chemical Hygiene and Safety Plan](#).
- Reviewing the division ISM plan.



- Contacting the division's self-assessment lead person.
- Working with the EH&S division liaison and/or subject matter expert.
- Obtaining training.
- Including staff that already have specialized knowledge in formal inspections.
- Participating in formal inspections of other divisions.

#### 4.1.2 Planning Self-Appraisals

The annual self-assessment performance criteria must be evaluated and addressed in the annual division self-assessment report. At the beginning of each performance year, the division plans the actions it intends to take towards satisfying the self-assessment performance criteria and how, at year-end, the division will measure whether its self-assessment program goals have been achieved. Planning for the division self-appraisal should include the following steps:

- Review division-specific requirements of the division ISM plan.
- Review the goals and opportunities for improvement identified in the prior year's division self-assessment and OCA validation reports.
- Review the Division ES&H Self-Assessment Performance Measures to determine how they apply to the division's operations.
- Review the annual guidance on performing division ES&H self-assessment.
- Identify actions the division will implement towards satisfying each applicable criterion.
- Determine the method(s) needed to appraise the effectiveness of implemented actions (e.g., inspections and review of documentation).
- Identify the documentation, databases, etc., needed to evaluate division performance against applicable criteria.
- Identify those performance criteria that require formal inspections to generate information on division performance.
- Create division checklists by using the LBNL Safety Walkaround Checklist and other resources.
- Designate the self-appraisal teams.
- Arrange for "on-the-job" training (i.e., in the workplace) from the EH&S division liaison and/or subject matter expert to learn how to look for deficiencies and how to determine the appropriate corrective action.
- Schedule appraisal team activities.
- Contact OCA for assistance, as necessary.

Evaluating division performance against the ES&H self-assessment performance criteria should be done periodically throughout the year. Divisions should develop procedures or processes for conducting the evaluations. Self-assessment to a large extent is reviewing data and information

that provide the evidence for ISM performance. Much of the data and information should be readily available from the internal systems and processes of the division's ES&H program. Other division data and resources are available through the EH&S Division web site, Corrective Action Tracking System (CATS) database, OCA web site, Lessons Learned and Best Practices database and from EH&S functional managers.

#### 4.1.3 The Self-Appraisal Team(s)

Division self-appraisals should include individuals with knowledge and understanding of

- Laboratory policies and division procedures for ES&H compliance,
- inspection techniques, and
- applicable ES&H requirements specific to division operations.

Although self-appraisal team members who participate in formal inspections are not expected to be “experts” in ES&H matters, they should have a sufficient familiarity with division operations and associated hazards to be able to communicate their findings to division management and staff.

#### 4.1.4 Inspection Checklist

The LBNL Safety Walkaround Checklist (available on the [EH&S Division homepage](#)), provides a comprehensive listing of possible ES&H deficiencies and noncompliances that self-appraisal teams may encounter in their inspection of LBNL space and facilities. The Checklist is categorized by types of work environment or ES&H functional areas and includes descriptions and questions of specific deficiencies and noncompliances.

Divisions should review the Checklist by work environment or functional area and determine which ES&H issues are pertinent to their operations (e.g., chemical safety may not apply to a division that has only an office work environment).

Standardized inspection forms are a good way of documenting the inspection and recording information for later transfer to reports and databases. Divisions may develop customized checklists focused on the hazards specific to the division.

### 4.2 Performing Effective Division ES&H Self-Appraisals

Divisions evaluate their operations against the performance criteria through such appraisal methods as:

- Interviews with division personnel,
- reviews of documentation (e.g., training records),
- review of past appraisal findings, and
- reviews of formal inspection findings. (While inspections identify deficiencies at a single point of time, an evaluation requires the analysis of all deficiencies discovered over a period of time. Refer to Section 4.3.1 Issues Management, Data Analysis.)

#### 4.2.1 Ongoing Informal Inspections – Safety Walkaround Program

Safety walkarounds are performed regularly as an integral management function. The purpose of a safety walkaround is to observe work, inspect the workplace, and talk with workers and support staff about the safe performance of work. The focus should not be merely on deficiencies but also on building teamwork, mutual understanding, and respect between managers and those performing work.

Each division publishes a program for implementing safety walkarounds as a component of its division ISM plan. The division walkaround program delineates who is required to perform walkarounds, the frequency, and the required reporting mechanism. Those managers/supervisors/work leads who perform walkarounds (as designated by the division ISM plan) are required to complete EH&S Division sponsored training to prepare them for this role.

The EH&S Division supports the management walkaround program by providing programmatic guidance, initial and refresher training, a standard method that can be used to document the observations from safety walkarounds (checklist and/or database), and oversight/mentoring as needed and/or requested.

Deficiencies identified during safety walkarounds not corrected on the spot are tracked in CATS (refer to section 4.3.1 Issues Management).

#### 4.2.2 Formal Self-Appraisals

The division conducts formal inspections to systematically identify deficiencies. Formal inspections are conducted by self-appraisal teams, are planned in advance, and usually make use of checklists to help identify applicable requirements. Deficiencies not corrected on the spot are tracked in CATS (refer to section 4.3.1 Issues Management).

Divisions are responsible for formally inspecting all of their operations and workspaces annually, unless identified hazards warrant more frequent inspections.

Divisions are not required to inspect rooftops, known asbestos-containing structures, and shared or common spaces (although if divisions observe deficiencies in these areas they should notify the responsible Laboratory Operations unit). Laboratory Operations units (e.g., Fire Department and Facilities Operations) perform inspections of shared/common spaces as part of their normal work routines. Roadways and pathways are not inspected under the LBNL Self-Assessment Program.

#### Conducting Formal Inspections

Self-appraisal teams should follow recommended protocol for formal inspections; establish a positive atmosphere by focusing on fact-finding, not fault-finding; and, during the inspection, be active listeners: firm, friendly, and fair.

It is the responsibility of the team leader or self-assessment lead to become familiar with the operations to be inspected. Review past findings, permits, occurrence reports, accident reports, etc., for the areas to be inspected. Know the potential hazards, and wear the required protective equipment.

Let the manager/supervisor/work lead know in advance the purpose of the inspection and what requirements and areas are being evaluated. Before actually beginning the inspection, notify the manager/supervisor/work lead of the inspection team's arrival and reiterate the purpose. It is preferable for the manager/supervisor/work lead to accompany the inspection team.

If the inspection team notices an employee working unsafely, it is preferable to ask the manager/supervisor/work lead, rather than the employee, to handle the situation. If the situation may cause death or serious physical harm to persons (permanent or prolonged impairment of the body or temporary disablement requiring hospitalization), then follow the Laboratory's stop work policy.

### **Stopping Unsafe Work**

**When employees discover conditions or practices that appear to constitute an imminent danger, they must take the following actions to prevent serious injury:**

Stop their own work immediately if it is related to the danger.

Alert the affected employee(s) or contractor(s) engaged in the unsafe work creating an imminent-danger condition and request that the work be stopped.

Call x6999 to report the incident; EH&S staff will investigate it

Reference: PUB-3000, Chapter 1

Answer as many questions as possible without letting the questions interfere with the inspection. An inspector can say, "I'll get back to you on that when I get more information." Preserve independence and objectivity. Try to understand, but do not become overly sympathetic with the inspected person's situation.

### **Things to say in a formal inspection:**

"I'm here to inspect compliance with hoists/crane requirements. Would you mind if I observed you while you go through your routine?"

"I'm here to inspect your hoods. I hope I'm not disrupting your work."

"Thank you for showing us your work area."

### **Things not to say in a formal inspection:**

"Why don't you have a lockout/tagout program?"

"This is an unsafe situation. I'm closing you down." (to the employee)

"Boy, this looks bad. How long have you been doing it this way?"

"You say you're a chemist? I can't believe you would store flammables and corrosives together!"

Do not become so focused on checklist items that you miss hazards that may not even be addressed by any of the checklists. Simply checking off items is NOT an effective inspection. A deficiency noted in an inspection should be recorded, even if it is not on the checklist.

Try to develop and/or identify a corrective action for each identified deficiency. (If the deficiency involves complex processes or equipment, confer with the manager/supervisor/work lead.) If there are questions about the appropriate corrective action (e.g., the inspector is not sufficiently knowledgeable, the requirement is subject to interpretation, or the correction is complex), consult with the EH&S Division liaison or subject matter expert.

Look for noteworthy practices during the inspections, and document these on inspection forms. Include them in the inspection close out, and describe them in the division's annual self-assessment report.

### Formal Inspection Close out

Close out a formal inspection by meeting with the manager/supervisor/work lead to acknowledge noteworthy practices and discuss deficiencies. Take the opportunity to discuss corrective actions (particularly for complex processes or equipment where a corrective action could affect a process or experiment). Identify deficiencies that can be corrected immediately, and encourage the manager/supervisor/work lead to make those corrections.

Do not specify names when describing deficiencies unless the employee is working in an unsafe and potentially dangerous manner.

Following the formal inspection, the division should follow its standard processes for entering deficiencies into CATS.

## 4.3 Tracking and Reporting Self-Assessment Result

### 4.3.1 Issues Management

#### Identifying and Tracking Deficiencies through Resolution

Divisions are required to enter assessment findings and corrective actions into the Laboratory's Corrective Action Tracking System (CATS). CATS is used to document and track through resolution issues identified from employee discovery, internal or external oversight assessments, external reporting, suggested process improvements and associated actions that require formal corrective action. The Laboratory's [Issues Management Program](#) document (LBNL/PUB-5519 (1), latest revision) and [CATS Database User Manual](#) (OIA-OCA-0001) contain detailed guidance on issues identification, tracking, resolution, closure, validation, and effectiveness of corrective actions.

## Data Analysis

Periodically (e.g., upon completion of all formal inspections, at mid-year, or at year's end) the division should analyze deficiencies, individually or collectively, in order to identify programmatic or system issues and to identify recurrence of issues, generic issues, trends and vulnerabilities at a lower level before significant problems result. The Laboratory's [\*Data Monitoring and Analysis Program\*](#) (LBNL/PUB-5519(3), latest revision) contains detailed guidance on data monitoring and analysis.

## Lessons Learned

Incidents discovered during the course of assessment may warrant development and dissemination of a Lessons Learned Briefing. Lessons Learned Briefings are initiated and documented in the Lessons Learned and Best Practices database. Deficiencies identified as a result of a Lessons Learned Briefing will be identified and tracked through resolution in CATS in accordance with [\*Issues Management Program\*](#) document (LBNL/PUB-5519 (1), latest revision). The Laboratory's [\*Lessons Learned and Best Practices Program\*](#) (LBNL/PUB-5519(4), latest revision) and the [\*Lessons Learned and Best Practices Database User Manual\*](#) (OIA-OCA-0002) contain detailed guidance on Lessons Learned development, dissemination, and feedback.

### 4.3.2 Division Annual ES&H Self-Assessment Report

The division reports the results of its evaluations against the performance criteria in its annual division ES&H self-assessment report. The annual division reports are prepared for Division Director review shortly after the end of the fiscal year. Following Division Director review and signature, the report is sent to OCA.

The division report should be a clear and concise description of division performance to meet the self-assessment criteria. Although the format is flexible, all division annual reports should include the following:

- Introduction/Executive Summary: Provide a brief overview of the division organization and mission. Describe the self-assessment approach taken by the division (i.e., descriptors of self-appraisal teams, inspections, and follow-up actions), including any lessons learned. Provide overall self-assessment results.
- Highlights of Division ES&H Performance: Summarize the division ES&H performance by including information on injury/accident statistics, summary of ORPS-reportable events, Price Anderson Amendments Act-reportable events, working within authorizations, corrective actions and noteworthy practices.

Describe actions taken to prevent recurrence of adverse events. Assess the effectiveness of the initiatives and corrective actions taken to address these issues. Identify any potential lessons learned in implementing these initiatives.

- Division Appraisal Against Performance Criteria: Describe the division process and results and/or include division performance data to address each of the self-assessment performance criteria:

- Assess effectiveness of division efforts to address the requirements of its division ISM Plan.
  - Describe actions taken to achieve division goals and to address deficiencies and other opportunities for improvement identified in the prior year's self-assessment and OCA validation reports. Analyze the effectiveness of these actions.
  - Assess performance against the Division ES&H Self-Assessment Performance Measures, following the annual Division ES&H Self-Assessment Guidance.
- Conclusion: Divisions should analyze if their performance was effective. They should identify future safety program improvements and goals resulting from the self-assessment process. Any institutional issues that were raised as a result of the self-assessment process should also be addressed. The annual division self-assessment report is the division's opportunity to communicate to Laboratory management its concerns in the ES&H areas, and to suggest methods for improving Laboratory as well as division performance.

Divisions are encouraged to broadly communicate self-assessment results to division staff, such as posting the self-assessment report on each respective division's website and sending the report to division senior and line managers. Increasing divisional attention to the self-assessment report could assist in preventing recurrence of adverse events and conditions.

OCA will validate the assessment quality and a sampling of results. OCA performs qualitative analysis and trending and "rolls up" self-assessment activities Labwide for reporting to Laboratory management and DOE. OCA distributes the Labwide report to all divisions to share lessons learned from the self-assessment activities.

## **5.0 List of Appendices**

**Appendix A:** [\(Current year\) Division ES&H Self-Assessment Performance Measures](#)

**Appendix B:** [Guidance for Performing \(current year\) Division ES&H Self-Assessment](#)